

APPENDIX METRIC INFORMATION

Definitions: Soft Conversion is an exact conversion of the English Unit. Hard conversion is a close approximation of the English unit but is rounded logically in the metric system.

<u>Basic Units</u>		<u>Prefixes</u>		
millimeter	(mm)	nano (n)	10^{-9}	one billionth
meter	(m)	micro (μ)	10^{-6}	one millionth
square meter	(sq m)	milli (m)	10^{-3}	one thousandth
cubic meter	(cu m)	centi (c)	10^{-2}	one hundredth
		deci (d)	10^{-1}	one tenth
liter	(L)	deca (da)	10^1	ten
		hecto (h)	10^2	one hundred
Pascal	(Pa)	kilo (k)	10^3	one thousand
kilopascal	(kPa)	Mega (M)	10^6	one million
		Giga (G)	10^9	one billion
Newton	(N)			
kiloNewton	(kN)			
Joule	(J)			
degree celsius	(°C)			
gram	(g)			
kilogram	(kg)			
Megagram	(Mg)	(metric ton)		
kilogram per square meter (kg/sq m)				
Hectare (ha)				

Metric Measurements

Length	=	millimeters, meters, kilometers
Area	=	square meters or hectare (10,000 sq m)
Volume	=	Liters or cubic meters
Mass	=	kilogram, metric ton (1000 kg)
Force	=	Newton (N = kg m/s ²)
Pressure, Stress	=	Pascal (Pa = N/sq m)
Energy, Work	=	Joule (J = N m)
Torque	=	Newton meter (N m)
Speed, Velocity	=	meters/second, kilometers/hour
Acceleration	=	meters/second squared
Density	=	kilogram/cubic meter
Temperature	=	degrees Celsius
Power	=	Watt

Soft Conversions	From English	To Metric	Multiply Quantity By
LENGTH	in.	mm	25.4
	ft	mm	304.8
	ft	m	0.3048
	yd	m	0.9144
	mile	km	1.609344
	mile	m	1609.344
AREA	sq in.	sq mm	645.16
	sq ft	sq m	0.092903
	sq yd	sq m	0.836127
	acre	sq m	4046.856
	acre	ha	0.404685
	sq mile	sq km	2.59
VOLUME	cubic inch	cu mm	16387.06
	cubic foot	cu m	0.028316
	cubic yard	cu m	0.764555
	gallon	L	3.78541
MASS	ounces	g	28.349523
	pound	kg	0.453592
	kip(1000 lb)	metric ton	0.453592
	ton	metric ton	0.9072
FORCE	pound	N	4.44822
	kip	kN	4.44822
FORCE/UNIT LENGTH	lb/ft	N/m	14.5939
	lb/in.	N/mm	0.1751
PRESSURE, STRESS	lb/sq ft	Pa	47.8803
	kip/sq ft	kPa	47.8803
	lb/sq in.	Pa	6894.76
	kip/sq in.	kPa	6894.76
ENERGY	foot pound	J	1.35582
MASS/AREA	ounces/sq yd	kg/sq m	0.0339057
	lb/sq ft	kg/ sq m	4.8824
	lb/sq yd	kg/ sq m	0.5425
	lb/cubic ft	kg/cu m	16.01894
	lb/cubic yd	kg/ cu m	0.5933
	lb/acre	kg/ha	1.1208
	ton/acre	metric	2.2417
		ton/ha	
TEMPERATURE	(°F - 32)/1.8 = °C		